



## ONTARIO FORAGE EXPO 2015

*Celebrating 10 Years of Hay Making in Motion*

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# A Message from the President Fred Brown



As the sun starts to shine brighter, we begin to reflect on the past year for the Ontario Forage Council and a look forward to the future. Last year, the Forage Council provided you, the forage producers, with cutting edge information through meetings and hands on events. Once again, the 2014 Ontario Forage Expo

provided producers with the opportunity to see various demonstrations of the latest forage equipment. This year will be no exception as plans are well under way for the 10th Anniversary of Ontario Forage Expo, which will be held in Waterloo County on July 7, and for the first time in Eastern Ontario in Dundas County on July 9. Stay tuned for more details!

Thank you to those who participated in our popular Profitable Pastures conference held on March 17th in Elmwood. Also, we will be starting plans for our very

popular annual Forage Focus meetings which will be held later this year.

As we progress into 2015, I would like to take this opportunity to thank all of the Directors for their time and input they have provided over the past year. But at the same time, I would encourage anyone who would like to be involved in the Forage Council to please contact us for more information. No matter whether you are a company or an individual with an interest in the forage industry, you are more than welcome to join the council.

As everyone heads to the hay fields this June, I encourage you to take samples of some of your forages which can be entered in the Milk Maker Competition, displayed at the 2016 CDX. This competition has increased in popularity over the past 2 years with samples being entered from as far away as Alberta. Come join us, enter a sample, and you may just have some of the best forages in Canada.

In closing lets all look forward to a great 2015!

Fred Brown

President-Ontario Forage Council

**10  
Years!!**

## Join us in celebrating *10 Years of Hay Making in Motion!!* **ONTARIO FORAGE EXPO 2015**

*2 Locations for 2015!*

Equipment will include:

- Mowers
- Rakes
- Tedders
- Balers
- Macerators
- Bale Baron

**Tuesday, July 7<sup>th</sup> in Waterloo County**

on **Ontowa Farm-2600 North Field Dr, Elmira**

**Thursday, July 9<sup>th</sup> in Dundas County**

on **Westergreen Farm-11245 Smail Rd, Brinston**

**FARM EQUIPMENT DEMONSTRATIONS & TARDE SHOW!**

**Free to the farming community!**

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Lunch will be available onsite

[www.ontarioforagecouncil.com](http://www.ontarioforagecouncil.com) for more details

# OFC Manager's Report

By Ray Robertson-Manager, Ontario Forage Council

It seems that I have delayed writing this report as long as possible. This was certainly not by choice - but out of necessity. Just two weeks ago now, I had major surgery in Hamilton, and that can truly change one's perspective on a lot of things. Despite the directions that I would be off work for the next 6 to 8 weeks, I thought sure, no lifting for that many weeks would certainly be easy to follow, but actually going back to the office for normal duties would happen much quicker than that. Well guess what? – I was wrong again!!! Taking total rest and regaining strength are new words in my vocabulary, but believe me "I am catching on". I must say, "I think I had the best surgeon possible and they provided excellent care. I have also had great care after coming home, along with the many many emails, calls, inquiries, visits, prayers and wonderful acts of kindness have been a tower of strength to me and truly appreciated". For all those things, I say "A VERY SINCERE THANK YOU."

Since our Fall Edition of "THINK GREEN!" was published, the Ontario Forage Council (OFC) has had as a very busy and productive term. Many accounts of that will be alluded to in this edition.

During the past couple of months I also served on the recruitment committee for a new Executive Director for the Canadian Forage & Grassland Association (CFGGA). This was a challenging task, but one that also proved very interesting. It was most rewarding to see the large number of applicants from all regions of Canada and the extremely high caliber of candidates. It made the task even more challenging, but it also became most evident that there were many great people that have a keen interest in the forage industry. As we narrowed them down in the final process, it also became most evident that they had done their due diligence and determined that the CFGGA was in a great position to move forward and they wanted to be a key part of that growth program. The final candidates made the selection very difficult, but in the end, our committee was unanimous in our selection. On April 17, 2015, Cedric MacLeod from Fredericton, New Brunswick was introduced as the new Executive Director for CFGGA. We welcome Cedric to the forage industry across Canada and look forward to working with him as he puts his vast teamwork experience and enthusiasm into practice with the forage industry.

An exciting time approaches as OFC celebrates the 10th Anniversary of the Ontario Forage Expo. This year we have expanded the program to include two locations with one in the East and one in the West. Waterloo County Soil & Crop Association will host Ontario Forage Expo - West on July 7, 2015 and Dundas County Soil & Crop Association will host Ontario Forage Expo – East on July 9th, 2015. OFC looks forward to working with the active and enthusiastic committee in both counties and everything is coming together for an outstanding success in both regions. Stay tuned for details and we look forward to your participation.

The Ontario Hay Listing's web site has been total revamped and has taken on a new appearance and hopefully be even more user friendly. The Ontario Hay Listings site has been extremely active throughout the year, and plays a major role in bringing sellers and buyers of hay and straw together. We currently have 3450 members on the site and a grand total of about 600,000 hits on the site during the past 7 years. We have been able to track these hits, having come from many overseas destinations as well as from Ontario, across Canada and the US. We have received numerous comments from producers this past year, expressing real appreciation for the effective service the site is providing.

The Ontario Hay Marketing Forum continues to maintain a keen interest in forage exports. The Hay Marketing Forum has a continuous presence on the OFC website which serves as an excellent marketing tool for local, national and international forage markets. The OFC web site continues to attract considerable traffic and we have received many positive comments about the crisp appearance of the site and the excellent information it provides.

We have continued to play an active role in the Canadian Forage & Grasslands Association. The 5th Annual Meeting and Conference 2014 was held at Bromont Quebec (near Sherbrook) on November 17, 18 & 19. It was labeled as a great success. The 6th Annual Meeting and Conference will be held in Saskatoon on November 16 – 18th, 2015. It is anticipated that several members will attend from Ontario.

OFC agreed to partner with the Canadian Dairy Xpo (CDX) for the 2nd National Forage Competition in Stratford. There was an increase in entries this year and the new location provided excellent visibility. Plans are now underway for 3rd annual competition and the new dates for the CDX have been announced as April 6 & 7, 2016.

Attendance at the CDX this year was over 15,000 - up from 13,900 in 2014, so a great opportunity to promote Ontario Forage Council and Ontario and Canadian forages)

We had a Trade Show Display at the BFO Annual Meeting that was held in Toronto in February 2015 and the Ontario MAPLESEED Pasture Award was presented to Dr. Peter Kotzeff from Chesley in Grey County.

The OFIP Forage Research Projects are proceeding and some useful research information should be forthcoming. Results will be published on the OFC web site when results are available.

The Financial support from OMAF has been extremely helpful and has permitted OFC to focus on a number of issues that has and will continue to assist in raising the viability and profile of the forage industry. We have appreciated the support of Joel Bagg and Jack Kyle and trust our relationship has also assisted them in their outreach to the farm community.

2014 was definitely a challenging year for forage producers. The Ontario Forage Council has been conscious of the producers needs, and has tried to provide as much assistance as possible.

The Ontario Forage Council has spent considerable time and effort on the provincial and national scene in addition to forage export initiatives which is certainly raising the profile of forages. We are receiving significant praise and encouragement for our efforts. I also want to express appreciation to Shannon McCarthy and Athar Shah in the Food Export Division of OMAF for their interest and support for the forage export promotion initiatives. Many of the plans started and seeds planted this year will continue to bear results well into the future. The continued support of an active membership and OMAF are most essential in achieving the goals and objectives of the OFC, as we strive to add greater economic value and stability to the forage producers in the agricultural community.

I want to express appreciation to our president Fred Brown for his leadership this past year. I would also like to thank the directors who have been very helpful when needed. And last, but certainly not least, I want to thank all the staff at the Ag Centre in Markdale and particularly Patricia Ellingwood, who has been very supportive and has always risen to the challenge on your behalf which is truly appreciated!!!!

Best Regards,

Ray Robertson, P.Ag.

Manager, Ontario Forage Council

**Check out our websites!**

[www.ontarioforagecouncil.com](http://www.ontarioforagecouncil.com)

&

[www.ontariohaylistings.ca](http://www.ontariohaylistings.ca)

# Hay Marketing Forum Update

By Ray Robertson-Manager, Ontario Forage Council

Ontario Hay  
Marketing Forum



From my perspective, it looks like spring in my area is off to a great start. We'll just keep our fingers crossed and be sure to say your prayers on the right side of the bed each night!!!! We might just get a good haying season this summer. I think we are entitled to it. ...

The Ontario Hay Marketing Forum (OHMF) will be meeting on June 4th, and an interesting agenda is planned and will be of key importance to hay marketers. All OHMF members are encouraged to attend. There has been a keen demand for good quality hay. Export opportunities for good quality hay will continue to be strong, and prices are very competitive with cereal crops. There continues to be many

inquiries from overseas hay buyers, and the Working Group has been working with a consultant in exploring the options for potential double compaction processing and the viability of shipping to overseas destinations. The report will be discussed by the membership.

The OHMF was represented at the World Dairy Expo in Madison Wisconsin in October and always attracts a lot of attention from US and overseas attendees. A couple of our members also attended the CFGA Annual Meeting and Conference in Bromont Quebec last November.

This year's CFGA Annual Meeting and Conference will be held in Saskatoon on November 16-18th, 2015. A significant part of the conference and the tour will focus on Hay exporting and has always been a real highlight of the conference. Stay tuned for complete details

as the conference planning progresses.

The Ontario Hay Marketing Forum is an excellent way to constantly market good quality hay and keep abreast of hay export market opportunities. OHMF members are also eligible to join the CFGA Export Group, to further expand your reach. For a membership form, or more information, please feel free to contact:

Ray Robertson, P.Ag.  
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Email: ray@ontarioforagecouncil.com  
Phone: 1-877-892-8663

Looking for Quality Hay Products?  
Be sure to check with the reputable  
members of the  
**Ontario Hay Marketing Forum**  
[www.ontarioforagecouncil.com](http://www.ontarioforagecouncil.com)

# Optimizing Pasture Utilization

By Jack Kyle, OMAFRA Grazier Specialist, Lindsay Jack.kyle@ontario.ca & Meghan Taylor, OMAFRA

Good pasture performance is dependent on steps taken at the start of the pasture season. Pasture is the lowest cost feed source available, and the opportunity for improved production is significant on most farms. A well-managed pasture will be very competitive with any other crop that you might consider for that land base provided the forage and livestock are well managed and a good rotational system is used.

The key to maximize both forage and livestock production is to manage the forage for optimum growth and bite size.

To achieve optimum growth, the forage plants need to be in a rapid growth state for as much of the growing season as possible. Maintaining a grazing height between 10cm (4 inches) and 30cm (12 inches) will allow the plants to sustain good growth and capture all the available sunlight to drive photosynthesis. This height also ensures maintenance of a substantial root system that effectively gathers water and nutrients from the soil and minimizes a summer dormancy period should hot dry weather occur. To maintain this level of forage growth the pasture manager must move livestock to fresh grass frequently. If too much pasture is offered at one time, then selective grazing will occur and less desirable plants will not be grazed, become mature and eventually, dominate the pasture.

After a plant is grazed it requires a significant rest and recovery period.

In addition, maximizing bite size is important to good animal productivity. As the pasture manager you have control of the bite size. Providing pasture that is the optimum size for the animal to bite (10-30cm) is the first step to maximizing intake. The second step is to have fresh forage available at all times. The percentage of unpalatable forage will increase in conjunction to prolonged time spent by animals in a given paddock. As a result, the importance of frequent moves to fresh pasture

is evident.

Proper fencing allows you to provide re-growth time for the grass and manage the quality and quantity of forage available to your livestock. Perimeter fences need to be substantial enough to keep your animals where they belong.

On the other hand, fences to sub-divide the pasture into paddocks do not need to be elaborate; single or double wire electric fence works very effectively. In addition, these fences can easily be repositioned if there is a desire for alternatively sized grazing areas.

Animals that receive adequate quantities of quality forage will not place nearly the challenge on fences that hungry animals will. Cattle are creatures of habit and if they know that fresh grass is going to be provided soon, they will patiently wait.

Moving livestock to fresh pasture every 1-2 days will optimize the quality and quantity of forage available for your livestock. This frequency of moves helps to prevent over grazing which greatly diminishes plant growth. It is important to have enough paddocks so that your livestock do not return to a paddock until the plants have fully recovered. This depends on growing conditions, but generally takes about 20 days in May and early June and about 30-45+ days in July and August.

Having enough paddocks is the key to a good grazing operation, with 10 to 12 being the minimum required for a successful system. Ideally, there will be about 30 paddocks for each group of livestock that you are managing. Experience has shown those producers are more satisfied and consistently achieve excellent results.

With attention to detail, you will have animals consuming large quantities of high quality forage and attaining optimum growth throughout the growing season. These steps will give you a very successful and profitable grazing system.

# 5 Forage Establishment Mistakes To Avoid

By Joel Bagg, OMAFRA Forage Specialist, Lindsay Joel.bagg@ontario.ca



It's springtime and we are anxious to get on the land and get our new forage seedlings in the ground. There are a few common mistakes made that limit the success of new forage seedlings and future yields and quality.

behind the drill. Sprocket packers are preferable over smooth rollers to reduce the risk of crusting and to push any seed on the surface into the soil.

## Neglecting Soil Fertility

Forage crops remove a lot of phosphorus (P) and potassium (K) and have high soil nutrient requirements. Alfalfa yields decline rapidly as soil tests drop below 12 ppm P and 120 ppm K. We are seeing more and more soil tests that are critically low in these nutrients, particularly K. In a recent East-Central Soil & Crop Improvement Association survey of 1,200 samples, 76% were below 100 ppm K! Be sure to soil test and fertilize accordingly. Suggested P and K application rates for new seedlings are provided in OMAFRA Publication 811, Agronomy Guide, Table 3–7, Phosphate Recommendations for Forages, and Table 3–8, Potash Requirements for Forages. (<http://www.omafra.gov.on.ca/english/crops/pub811/3fertility.htm>) (Don't Lose Hay Yield To Poor Fertility <http://fieldcropnews.com/?p=3760> )

Over the years, with our newer drills we have somehow lost our ability or our willingness to band starter fertilizer in new forage seedlings. Starter fertilizer can be especially advantageous in stands where P fertility levels are low to medium. Ideally, MAP starter should be placed 2.5 cm (1 inch) below the seed. Additional fertilizer required can be broadcast and incorporated before seeding. If sulphur is required, sulphate can be applied at establishment or elemental sulphur applied the previous year. (Sulphur On Alfalfa <http://fieldcropnews.com/?p=9092>)

## Using Cheap Seed

Buying cheap forage seed is a poor way to save money. Significant performance differences exist between varieties. The cost of seed is only a very small percentage (typically < 4%) of the cost of producing forage. As land costs increase, the seed cost percentage decreases. The use of the best research proven forage varieties provides high yields of more persistent stands with better disease resistance and appropriate maturity. Using cheap seed has the potential to result in significant yield losses with more risk of disease and winterkill over the life of the stand. It takes very little extra yield to justify higher valued seed.

Certified seed sold under a variety name must meet specific requirements for germination and weed seed content. Forage seed may also be sold as "common seed" or as a "brand" that may be blends of different seed lots. Germination and weed seed content requirements are less rigorous than for certified seed. Common seed has no assurance of characteristics such as disease resistance or winter hardiness. The performance of stands established using common seed is unpredictable and will vary from year to year. The use of high performance, proven varieties, rather than unknown brands or common seed, is strongly suggested.

## Not Seeding New Forage Stands Often Enough

Many alfalfa-based stands are simply too old, resulting in huge losses of forage yield. Alfalfa yields are usually at their maximum during the first year or two following the establishment year and then decrease. By the third year, yields have often declined by about 15-20%, and possibly 35% by the fourth year. That is a lot of yield to give up! There are many benefits from alfalfa in a rotation in addition to the improved soil health and environment, including:

100 lb/ac (110 kg/ha) nitrogen credit to the corn crop following alfalfa in the rotation, and

10 – 15% corn yield increase following alfalfa rather than corn after corn.

The nitrogen credit is currently worth about \$60. Even with \$4 corn, the increased corn yield is close to \$100. Adding these two corn crop benefits together, \$160 goes a long way in paying the cost of forage establishment somewhere else in the rotation.

Forage stand rotation decisions should be based on forage yield potential, not on the cost of re-establishment. Establishment costs are typically less than 8% of the total cost-of-production (COP) of hay, with the seed costs often less than 4%. Land and harvest costs per acre change little as yields decline, so those costs increase dramatically on a lb of yield basis. Depending on where you farm in the province, the opportunity cost of land rental can represent over 40% of the COP. With high land and harvesting costs, lower yields cost much more than forage establishment costs. When in doubt, rotate!

## Poor Packing Before and After the Drill

This is a big, but all too common mistake. Forage seed is very small, making good seed-to-soil contact essential for germination, particularly in dry soil conditions. A loose, lumpy seedbed dries out quickly, and lumps make the uniform emergence of young seedlings difficult. A firm, level, clod-free seedbed is very important for uniform seeding depth and good seed-to-soil contact. Avoid creating a soft, fluffy seedbed by deep tillage. Using a spike-tooth harrow before the drill loosens the soil rather than packing it. Soil should be firm enough at planting for a footprint to sink no deeper than 9 mm (3/8 inch). If necessary, **pack before seeding**, in addition to packing after the drill. Packing after seeding results in more rapid and even germination. Use press wheels or pull a packer

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# Making High-Quality Silage Bales

Shared by New Holland Canada

When silage bales are put up correctly, farmers and ranchers get feed quality similar to that achieved in upright silos, but without the costs associated with these structures. It's a quick, low-cost way to make high-quality feed. However, making consistent, high-quality bale silage is not simply a matter of baling high moisture hay and wrapping it in plastic. Making high-quality bale silage requires close management of the complete process, from start to finish.

Several factors enter into the quality equation: crop quality, bale quality, wrap time after baling, film considerations, bale handling method and bale storage all play a part in producing high-quality bale silage.

## 1. Crop quality

Crop quality is determined by four basic factors: the amount of sugars contained in the plant, the amount of wilting time between cutting, baling, and wrapping, and the amounts of soil and manure contained within the windrow as it is baled.

The amount of sugar contained in the plant is determined by crop variety, the relative age of the plant when it is cut, and the climate. The earlier the plant is cut in its growth cycle, the higher the sugar content will be. Climate comes into play after the plant is cut and relates to the amount of time needed to wilt the plant to approximately 50% dry matter. The ideal moisture range for bale silage is between 50 -60% moisture.

Crops baled and ensiled at lower moistures - 45% or less - are lower in density and can cause wrap film damage and consequent bale spoilage due to stems puncturing the film during wrapping or moving. Excessively high moisture levels - above 70% - can lead to butyric acid and mold formation in the bale, resulting in the loss of the entire bale as feed.

After cutting, the crops may be either laid out in a swath or windrowed while wilting down to the correct moisture content. Care must be taken at this point to position the rake or merger tines above ground level as the crop is windrowed. Proper raking height minimizes the potential for soil or manure to become entrained in the windrow, and thus the bale. Both contain bacteria which are detrimental to the ensiling process, and which, under certain conditions may cause the ensilage to become toxic to the animals.

## 2. Bale quality

Bale quality is largely determined by the operator as the bale is formed. Silage bales should be made with the highest density possible, which may require slower ground speeds in order to pack the bale tightly. Another method of increasing bale density is to process the bale by cutting the crop into smaller particles as the bale is made using an onboard crop cutter. Processing the bale in this manner improves bale density as well as operator efficiency.

The higher the relative bale density, the lower the amount of air initially trapped in the bale. Bales should be uniform in size and square shouldered to provide the best contact area for the wrap film. In certain conditions where weather is a concern, additives may be applied to assist in the ensiling process. Bales should be tied with plastic twine or wrapped with net.

All sisal twines should be checked prior to using for application of rodenticides or chemical preservatives to prevent rotting. These chemical additives may degrade the wrap film during storage.

## 3. Wrap time after baling

Wrap time and handling after baling is critical. This should be a fast moving process, with a maximum time interval between bale formation and wrapping of no more than 2 hours. This minimizes the outside bale face to air exposure, limiting the amount of plant respiration taking place. In higher temperatures, this time interval should be shortened further, as higher temperatures increase the plant respiration process.

Handling before wrapping should be done only with a bale clamp, never a spear or fork which penetrates the bale. Using these methods adds a substantial amount of air into the bale, lengthening the time spent in the initial aerobic phase of fermentation, and increasing the chance of spoilage.

## 4. Film considerations

Film application and quality are important because uniform wrap film distribution around the bale provides the correct overlap seal necessary to promote the ensiling process. High-quality wrap film provides a consistent, durable covering over the bale which is resistant to punctures and oxygen movement. The objective of film application is to apply the film evenly around the entire bale for proper sealing. Film can be applied in either a 4 layer (2 + 2) application, or 6 layer (2 + 2 + 2) application, with a 50% overlap being ideal.

With individual wrappers, this is accomplished by placing the bale on a rotating turn table as well as turning the bale on the table in synchronized movement with the table rotation as the wrap film is applied. With in-line wrappers, the wrap applicator assembly is synchronized with the bale pushbar and applies the wrap film as the pushbar moves the assembly forward slowly with each bale wrapped.

Oxygen penetration in plastic film wrap depends on temperature and the total thickness of film. For long term storage in warm weather conditions, 6 layers of film wrap are recommended. For short term storage in warm weather, or long term storage in cool weather conditions, 4 layers are normally enough to protect the bale.

Film color plays an important part in the process. Temperatures inside the bale rise as the ensiling process proceeds, and black or dark colored film can influence the

# Establishing a New Pasture

By Jack Kyle, OMAFRA Grazier Specialist, Lindsay Jack.kyle@ontario.ca

Reasons to establish a new pasture include moving from annual crops to perennial pasture or forage, or to improve an existing pasture that is not producing very well. When planning to seed new pastures there are a few questions that you should ask yourself before actually starting the process. An existing pasture that is not very productive may respond to the application of fertilizer, but the response will not be nearly as significant or long term as reseeded and getting productive species established in the field.

## What is the intended purpose of the new seeding?

- Do you want early-season grazing or late-season grazing?
- Are you going to cut it for stored forage sometimes ?
- Is this pasture going to stay down for many years or is it part of a farm crop rotation plan and will be planted to another crop in less than 10 years?

## Pasture Species

If you want late-season and stockpiled grazing to be the main use of this pasture, then trefoil and tall fescue should likely be your predominate species. If you want early season pasture, then clovers, alfalfa and orchard grass should form the basis of the mix. Alfalfa will do very well on well drained soils, while poorly drained soils are better to be seeded to clovers and trefoil.

Many people are overly cautious about including alfalfa in a pasture. With proper management, an alfalfa based pasture will give you the best animal performance along with the highest yields of quality forage. Alfalfa's deep roots and heat tolerance make it the obvious choice for mid- to late-summer grazing. With a good rotational grazing system and best management practices, it will be very successful.

There are a number of grass species that should be considered. My preference is for orchard grass because of its early spring growth, rapid regrowth, and once the seed head is removed it stays vegetative for the rest of the growing season. Meadow brome is also an excellent pasture species. Timothy is often found in mixes but it has poor summer re-growth. Other grass species that warrant consideration include ryegrass (especially for a short duration pasture), reed canary grass, festolium (cross between ryegrass and fescue) and possibly bluegrass (especially for a long term pasture). There is a good description of forage species in the OMAFRA Publication

811, Field Crop Agronomy Guide at <http://www.omafra.gov.on.ca/english/crops/pub811/3species.htm>

## Soil Fertility

Soil fertility is a major consideration. The new seeding will not perform very well if the pH is too low, or if the phosphorous and or potassium levels are low. Pasture fertilizer rates based on soil tests are also in the Agronomy Guide. <http://www.omafra.gov.on.ca/english/crops/pub811/3fertility.htm>

## Seeding

Forages can be no-tilled or planted into a tilled seed bed. The seed bed should be firm enough to allow for good depth control and seed-to-soil contact. Forage seeds are very small and should be planted 7-10 mm (1/4 – 1/2 in) deep. The use of a companion crop is optional. If using a companion crop, consider using oats harvested as haylage or baleage at the boot to very early heading stage. This will eliminate the competition effect from the companion crop and allow the new seedling every opportunity to grow during July and August. The field should not be grazed until the forage plants are well rooted. Cattle tear the pasture plants off, and if they are not fully anchored in the soil they will be pulled out!

Planting the appropriate species into a reasonably fertile seed bed should give you a productive pasture for many years.

The Ontario Forage Council would like to thank the **Beef Farmers of Ontario** for generously hosting the OFC Director's meetings. Your friendly, approachable staff add to the welcoming experience! Thank you!



Foragebeef.ca

Technical Information  
for the Canadian  
Forage Beef Industry

### Poor Weed Control

Lack of weed control during the establishment period will impact yield and forage quality for the life of the stand. Perennial weeds should be eliminated before seeding. Herbicide control of broadleaf annual weeds at establishment is especially important in direct seedings. Determine the optimum time of spraying by the stage of development of the new seedlings. The risk of injury to alfalfa seedlings is greatly increased when 2,4-DB application is made outside of the first- to the third-trifoliate stage. 2,4-DB can suppress legume growth for a period of 2 – 3 weeks and severe injury can occur under drought or high temperatures. Uniform emergence as a result of good seedbed preparation and packing make it easier to properly time the herbicide application with reduced risk of

legume injury. Target the first-trifoliate stage, where weeds are smaller and easier to control. Grower experience suggests that injury to seedling alfalfa plants can be minimized when reducing the lowest labelled rate of 2,4-DB by 25%. A reduced rate may reduce the level of weed control. (OMAFRA Publication 75, Guide To Weed Control.

<http://www.omafra.gov.on.ca/english/crops/pub75/pub75ch10.pdf>

Refer to “Successful Forage Establishment” <http://fieldcropnews.com/?p=9535>.

[www.Fieldcropnews.ca](http://www.Fieldcropnews.ca)  
An excellent resource of current forage and crop information!

## CFGFA Announces a New Executive Director!

The Canadian Forage & Grassland Association is pleased to announce Cedric MacLeod, of Fredericton, New Brunswick as our new Executive Director.

“We are very excited to have Cedric coming on as our Executive Director,” says Doug Wray, CFGFA Chair. “He brings a strong background in forages, and experience working in organizations to successfully advance their goals and agendas. We look forward to his leadership as we promote the forage and grassland industry and address the challenges and opportunities going forward.”

Cedric received his post-secondary Agriculture degree from Nova Scotia Agriculture College and his Masters in Soil Science from the University of Manitoba, with a focus on Canadian Prairie agricultural production systems including extension, consulting and research.

Cedric has over 9 years of entrepreneurial experience, having served as President of MacLeod Agronomics, an agri-environmental consulting firm specializing in the analysis and integration of sustainable agricultural practices for the Canadian ag-sector. As well, he and his wife own and operate Local Valley Beef, a grass-fed beef

ranch in western New Brunswick. As such, he has considerable knowledge and experience in extended grazing seasons, rotational grazing and integrated forage production systems.

Cedric also has considerable experience working with national and provincial not-for-profit boards and has served on both sides, as a board member on some organizations and as Executive Director for both the Canadian and New Brunswick Young Farmers’ Forums.



**CFGFA Annual General Meeting information is posted on their website.**

**Read transcripts of past presentations and information that is not available anywhere else!**

System Calculates Relative Feed Value of Every Alfalfa Hay Bale  
Harvest Tec on-baler relative feed value calculator evaluates alfalfa RFV of every bale!  
For more information, visit [harvesttec.com](http://harvesttec.com)



**Canadian Forage and Grassland Association’s 2015 Conference and Annual Meeting will be held November 17 - 19, 2015 - Sheraton Cavalier Hotel - Saskatoon, SK Watch the CFGFA web site for details and registration info:**  
<http://www.canadianfga.ca>



Attention beef and sheep producers!!  
Who will you nominate for the Mapleseed Pasture Awards?  
Visit [www.ontarioforagecouncil.com](http://www.ontarioforagecouncil.com) for information and applications!



inside temperature by as much as 30 degrees. For this reason, wrapping with black film is not generally recommended in warm climates.

White film produces the lowest day/night temperature variation in warm climates, and is recommended for most applications. Beige or green colored films produce slightly elevated temperatures over white, but can be used for late season wrapping, or in cooler climates without problems.

## 5. Bale handling

Final bale handling at the storage site should be completed within two hours of wrapping. If moving bales from the wrapping site to a different storage area, they should be moved as soon as possible, then left in place

undisturbed until the bale is needed for feeding.

As with handling prior to wrapping, use of a clamp is strongly recommended in order to minimize the potential for punctures or tears in the wrap film. This minimizes the potential for the wrap film seal to shift or relocate, reducing the possibility of air entry through a puncture or tear in the film.

## 6. Bale storage

Bale storage areas should be level and well drained, with no sharp stones or other objects which may puncture the wrap film when the bale is placed. Storage areas should be protected from livestock, and isolated from buildings and trees to avoid possible infestation by vermin or birds.

# Cutting and Conditioning Hay for Quality

Shared by New Holland Canada

Putting up a quality hay harvest requires close attention to details. Crop maturity, the weather, conditioning practices and storage decisions all contribute to the nutritional quality of the final product. Hay quality is never higher than that moment just before cutting. But with careful attention to some key factors, you can be sure that you're keeping as much nutritional value in the crop as possible through harvest and storage.

Crop maturity at harvest plays an important role in determining forage quality. Forage crops harvested as young, leafy plants will have greater protein and better digestibility than large-stemmed plants. Early cutting also offers other benefits, such as improved yields and digestibility of the second cuttings, and potentially more total cuttings throughout the season. When you start cutting depends on many factors—acres to be harvested, type of forage, equipment and labor available, and, of course, the weather.

Conditioning is a critical part of the cutting process. You'll harvest crops more quickly and produce more nutritious, high-value feed thanks to the choice of conditioning systems. Choose the gentle conditioning of rubber chevron-intermeshing rolls that save the delicate leaves, steel chevron-intermeshing rolls for winter forage or long-stem and cane grasses, or flail conditioning system for fast drying of grass hay.

- **Chevron rubber intermeshing rolls:** This system is best for legume crops and crop mixtures, and prevents material from wrapping around the rolls. Gentle chevron rubber intermeshing rolls provide full stem crimping and cracking with a scrubbing action while handling high-feed-value leaves delicately, making it the ultimate solution for alfalfa and clover. The rubber rolls crimp and crack stems evenly along the entire length of the plant for fast drydown but gentle leaf retention. This is possible because of the large roll diameter, the rubber compound, the intermeshing fit and profile of the lugs. These features work together to grip the crop and generate an even flow of crop through the rolls to provide an even spread into fast drying swaths or windrows.
- **Chevron steel intermeshing rolls:** Durable chevron


steel intermeshing rolls are designed for use with all crops, but show a real advantage in cane-type crops, grain forage crops and extra-tall grass crops. The chevron pattern of the steel lugs provides aggressive full stem crimping, smooth crop flow, and even distribution into fast drying swaths or windrows. Rugged all-steel roll construction resists wear better than rubber, providing a long life even in highly abrasive conditions.


- **Flail conditioning:** The flail design delivers more effective conditioning of grass crops for fast drying. The flail conditioning system is more aggressive to remove the waxy layer on stems and speed moisture release.
- **Adjusting conditioning rolls:** For the best performance from a roll conditioning system, check the settings for roll timing, roll gap and roll pressure.
- **Roll timing:** Set the timing to provide equal clearance on the front and back of the lugs as they turn so that stems are crimped without shattering. If the roll timing is set incorrectly, the roller lugs may touch, greatly increasing power requirements, roll wear and field losses.
- **Roll gap:** Adjust roll gap to a setting just slightly smaller than the average thickness of crop stems. While the traditional roll gap setting for alfalfa is approximately 1/8", it's important to adjust this based on the variety and condition of your crop. When adjusting roll gap, adjust the ends of the upper roller so that the rolls are parallel; a roll-pin punch may be used as a gauge to ensure the gap is set equally across the rollers.
- **Roll pressure:** Determine roll pressure settings by considering the volume of crop passing through the conditioner. Keep in mind that this will vary throughout the season. When yields are at their peak, use increased roll pressure. Lower-yielding harvests require less pressure to provide adequate conditioning. To find the proper setting, increase roll pressure gradually by turning the crank until over-conditioning becomes evident; then reduce the pressure slightly.

# Milk Maker Forage Competition Winners



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for more information and updates on this exciting competition!

**You could WIN 1st place & \$500 in 2016!!**

## CONGRATULATIONS TO THE 2015 WINNERS!!

### Dairy Hay Class

**1st Ian Dann, Clover View Farms-Thorndale, ON**  
Preservative: Nuhn Forage Inc.

**2nd Larry Davis, Daveland Farm-Burford, ON**  
Preservative: Nuhn Forage Inc.

### Grass Hay Class

**1st Ian Dann, Clover View Farms-Thorndale, ON**  
Preservative: Nuhn Forage Inc.

**2nd Pedro Slits, Slits Dairy Farms-Brunner, ON**  
Preservative: Nuhn Forage Inc.

**3rd Paul DeJong, Ventry Hill Farms-Dundalk, ON**

### Balage Class

**1st Chris & Brianne Brown-Beslea Farms-Yarker, ON**  
Seeds: Quality Seeds Inc.

**2nd Steve Logel, Dam View Farms-Wallentein, ON**  
Preservative: Nuhn Forage Inc.

### 1st Cut Haylage Class

**1st Neil Wideman, Early Rise Jersey Farms-Elmira, ON**  
Inoculant: Silo King

### 2nd-4th Cut Haylage Class

**1st Bart Nyland, Nylandale Farms-Lucknow, ON**  
Preservative: Pioneer

**2nd Pedro Slits, Slits Dairy Farms-Brunner, ON**

**3rd Dale Martin, Margrove-Elmira, ON** Inoculant: Silo King

### Corn Silage Class

**1st Rene VanLangen, VanLangen Farms Inc.-Norwich, ON**  
Inoculant: Silo King

**2nd Henk Dirksen, Dirksen Holsteins-Alma, ON**  
Inoculant: Silo King

**3rd Dale Martin, Margrove-Elmira, ON**  
Inoculant: Silo King

### BMR Corn Silage Class

**1st Milky Wave Farms-Elmira, ON** Inoculant: Silo King

**2nd Pedro Slits, Slits Dairy Farms-Brunner, ON**

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## THANK YOU TO OUR 2015 PARTNERS!!



Winning entries will be displayed for all to admire at the "Milk Maker Forage Competition" display at the Canadian Dairy XPO in April 2016!

# Exciting News - Paying-It-Forward!

ACC announces changes to the Advance Payment Program

Agricultural Credit Corporation (ACC), the second largest Not-For-Profit administrator representing producers nationally, is dedicated to furthering excellence in delivering the Advance Payments Program, with the goal of going beyond the ordinary in raising awareness to producers to assist them in their cash flow needs. ACC stands apart by being the first and only administrator who delivers the program in all provinces with over 300 classes of agricultural products.

On March 17th, 2015, they announced to producers nationally the exciting news of the passage of Bill C-18. We are thrilled to share in more detail noteworthy changes under this new Act along with ACC's improvements to the APP.

Many of the changes will make the application and repayment process easier than ever and make the program more accessible and attractive to Canadian producers using the Advance Payments Program. ACC is now delivering the many exciting amended changes through their 2015-2016 application that is now available.

Helping producers have access to the government's extraordinary loan programs nationally, at preferred interest rates is quite a privilege. By sharing these noteworthy changes, is our way of Paying-It-Forward.

**For more information:**

**Contact ACC toll free 1-888-278-8807 or visit their website at [www.agcreditcorp.ca](http://www.agcreditcorp.ca)**

## Sulphur on Alfalfa

By Joel Bagg, OMAFRA Forage Specialist, [Lindsay.Joel.bagg@ontario.ca](mailto:Lindsay.Joel.bagg@ontario.ca)

Sulphur (S) received from atmospheric sulphur dioxide emissions (acid rain) in Ontario has steadily declined by over 50% during the last 25 years. We are beginning to see yield responses in more situations when applying S to alfalfa. Sometimes the response is dramatic, while in other situations there is no response. Tissue sampling of alfalfa is a useful diagnostic tool in predicting whether there will be an economic response to applying S.

S availability varies from site-to-site and from year-to-year according to temperature and rainfall. Soil organic matter plays an important role in providing available S to plants. Sulphate is very mobile in soils, similar to nitrate, and can be leached into the subsoil and become unavailable to plants (but not as easily as nitrate). S deficiencies have also increased due to some reductions in organic matter, and higher crop and protein yields. There is considerable S in manure. S deficiencies are more likely to occur on low organic matter soils, and soils that have not had a manure application within a couple of years. Within fields, sulphur deficiency symptoms may show up first on eroded knolls and other low organic matter areas.

### What Does S Deficiency In Alfalfa Look Like?

Alfalfa has the highest S requirements of any of the field crops. A 4 ton/acre crop of alfalfa removes about 20 lbs/ac of S. S deficient alfalfa plants will be spindly and uniformly light green or yellowish (as opposed to a yellow top and green bottom, etc), with weak growth.

### How Do I Know If Have A Deficiency?

There currently is not a reliable soil test for S in Ontario. Sulphate levels are quite variable, and may be leached from the soil between soil sampling and plant growth.

Tissue testing of alfalfa (at mid-bud to early-flower stage) is considered a suitable diagnostic approach for determining S deficiencies. Sample the top 6 inches of 35 stems and send them to a laboratory for tissue analysis. The critical level below which alfalfa is considered S

deficient and may benefit from applying sulphur is 0.25%. If a check is desired, take a similar sample from an area with no visual S-deficiency symptoms.

A 2012 field survey of Ontario alfalfa stands indicated that 21% of fields had S- tissue analysis below this level. Put another way, 79% of these fields would have been unlikely to have an economic response to applying sulphur. It is also noteworthy that 37% of these fields tested below the critical K value of 1.7%, almost twice as many than were S deficient. Neglecting K fertility, while attempting to improve S fertility is not an effective strategy.

### What Form of S?

What is the most economical source of S to use with alfalfa? The sulphur must be in the sulphate form to be taken up by the plant. Sulphate fertilizers include:

- ammonium sulphate 21 – 0 – 0 – 24)
- potassium sulphate (0 – 0 – 50 – 18)
- sulphate of potash magnesia (Sul-Po-Mag or K-Mag) (0 – 0 – 22 – 20)
- calcium sulphate (gypsum) (0 – 0 – 0 – 17)

All are equally effective as sources of sulphate. Depending on what assumptions you make, current prices make S in the sulphate form worth about \$0.90 or more per lb S. To determine the most economical source of sulphate, get some local price quotes and do the math.

Ammonium sulphate provides nitrogen which should not be needed by the alfalfa. K-mag and potassium sulphate also provide potassium which is usually also required in alfalfa, but potassium sulphate is difficult to source and more expensive in some areas. Gypsum can be a good source of sulphate, but has no advantage in improving soil pH. Thiosulphate liquid forms, ammonium thiosulphate (12 -0-0-26) and potassium thiosulphate (0-0-25-17), are readily available, but liquids are less convenient for fertilizing alfalfa and generally more costly per unit of S than dry forms.

Elemental sulphur (0-0-0-90) consists of finely ground sulphur that has been pelletized, and must be converted by oxidation to sulphate by soil bacteria before plants can utilize it. The rate of availability depends on particle size, method of application and moisture. Incorporating it into the soil before establishment makes it more readily available. In some circumstances, 50% of the sulphur may be available in the year of application, while the remainder is more slowly available. Elemental sulphur is currently worth about \$0.35 per lb S. Applying a single application of elemental sulphur rather than sulphate, supplies a cheaper S source over a longer period of time and reduces the need for annual applications. An application of 50 lbs/ac of S should last the life of a productive 3 year alfalfa stand.

**When Should I Apply It?**

Sulphate-S should ideally be applied in the spring at green-up to improve plant utilization, minimize losses due to leaching, and receive a first-cut yield boost (Figure 2). Elemental sulphur can be applied by:

incorporating it into the soil with other fertilizer at establishment (Figure 3) , or blending it with P and K (and possibly boron) and broadcasting it after a cut.

**How Much S Should I Apply?**

A general thumb rule for S application on alfalfa is 5 lb/ac per ton of dry matter yield. Some S is still available in reduced amounts from atmospheric deposition and organic matter. The University of Wisconsin recommends 15 – 25 lbs/ac of S in the sulphate form broadcast on established stands

annually, or 25 – 50 lbs/ac of elemental S incorporated at seeding. Research is required to verify these numbers in Ontario.

**Ontario Research**

Sulphur deficiencies in alfalfa have been more common in the mid-western US and north-western Ontario, because they are located upwind of much of the sulphur producing industrial pollution that has been cleaned up. Ontario research on sulphur rates, source, and timing for alfalfa has been more limited. Results from recent research trials applying sulphate to alfalfa have been mixed. Some sites have shown no response to applying sulphur. However, the most responsive site showed a dramatic yield increase in an alfalfa-grass mix of 1.55 ton/ac, a crude protein increase of 4 percentage points, and a percentage of alfalfa in the harvested forage improved from 33 to 56%.

To confirm that an actual yield response has occurred, farmers may want to leave a test strip where no S is applied.

**Bottom Line**

Tissue test alfalfa fields showing potential deficiency symptoms to determine if S should be applied, especially fields with low organic matter soils and those that do not receive manure. Applying elemental-S bulk blended with other fertilizer is the most cost effective method of providing S. Spring applications of sulphate can provide a more immediate yield response.

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Submit your entries to the Milk Maker Forage Competition for the chance to win a first place prize of \$500! Classes for Alfalfa Hay, Grass Hay, Baleage, Haylage, Silage, and BMR Corn Silage! This competition is open to ALL forage grown for dairy production in Canada!

For more information visit [www.ontarioforagecouncil.com](http://www.ontarioforagecouncil.com)



The Ontario Forage Council thanks the Ontario Ministry of Agriculture, Food and Rural Affairs for their continued support!

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